

Serial No.: 10/091,634
Filed: March 5, 2002
Applicant: James R. Mock, Sr. et al.
Group Art Unit: 3751
Examiner: A. Kokabi

Remarks

This Amendment After Final is being submitted in reply to the Final Office Action dated September 5, 2003. Claims 2-5 and 7-22 are pending in the application, and claims 23-27 have been added as new claims in this Amendment After Final.

The Examiner has rejected claims 2, 5, and 7-20 under 35 U.S.C. 103(a) as being unpatentable over Nelli et al. in view of Watson. The Examiner states that Nelli et al. discloses a device and method for introducing a chemical into a liquid and that Watson discloses an apparatus for controlled chlorination of water with an alkali metal dichloroisocyanurate. It is the Examiner's position that it would have been obvious to one of ordinary skill in the art to have provided the device of Nelli et al. using the product disclosed in Watson to provide for a more soluble and less acidic disinfectant for swimming pools. Applicants respectfully disagree.

As was argued in the previous Amendment, cyanuric acid is not equivalent to dichloroisocyanurate even though dichloroisocyanurate includes cyanuric acid. Again, one drawback with using dichloroisocyanurate is that over time the hypochlorous acid becomes depleted (but the cyanuric acid remains) and additional dichloroisocyanurate must be added. Therefore, cyanuric acid builds-up and over time blocks the chlorine so that the chlorine becomes less and less effective as additional compound is added, which is commonly referred to as "cyanuric acid block." When chlorine is "blocked," the swimming pool becomes unhealthy because the chlorine is no longer effective as a sanitizer.

Again, as was argued in the previous Amendment, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. Neither reference discloses or even suggests using cyanuric acid in a dispenser. Further, all the claim limitations must be taught or suggested by the prior art, and because using cyanuric acid is neither taught nor suggested by either of the references, the present invention is not obvious.

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In the "Response to Arguments" section of the Final Office Action, the Examiner has stated that Applicants' argument with regard to NSF standards was not persuasive. Applicants respectfully submit that the NSF standards were discussed in the previous Amendment because the NSF standards show what is being done in the art, and the NSF standards teach away from what the Examiner states is obvious. The NSF standards are applicable to what is obvious to one skilled in the art, which is the basis for the Examiner's rejections, because those skilled in the art follow the NSF standards. Further in this regard, as stated on page 2, lines 2-6 of the specification, chlorine and cyanuric acid cannot be added to a pool together because a chemical reaction will occur. Therefore, one skilled in the art would not place cyanuric acid into a dispenser for chlorine as the Examiner states is obvious. Again, cyanuric acid is not equivalent to dichloroisocyanurate.

Not only do the rejected claims recite cyanuric acid, which is not obvious in view of dichloroisocyanurate, but the claims recite other differences. Claim 2 recites placing the permeable bag containing cyanuric acid into the cavity of the feeder. Nelli et al. does not disclose a bag containing cyanuric acid. Rather, Nelli et al. discloses pouring a chemical into the container (column 3, lines 11-17). Therefore, claim 2 is not obvious in view of Nelli et al. and Watson.

Claim 7 recites a method of dispensing cyanuric acid into a swimming pool, which is neither taught nor suggested by either Nelli et al. or Watson. Because cyanuric acid is not an equivalent of dichloroisocyanurate, claim 7 is not obvious in view of Nelli et al. and Watson.

Claims 11 and 16 have been amended to recite that chlorine is dispensed with a dispenser. Therefore, chlorine is dispensed into the pool separately from cyanuric acid. With the present invention, cyanuric acid is dispensed in addition to chlorine in an additional dispenser, not within the same dispenser or in lieu of the chlorine dispenser. It is not simply placing cyanuric acid within an existing chlorine dispenser. Therefore, claims 11 and 16 are not obvious in view of Nelli et al. and Watson.

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Claim 19 recites a method of packaging cyanuric acid for dispensing the cyanuric acid from the packaging. Not only is cyanuric acid not obvious in view of these references, but neither Nelli et al. nor Watson teach or even suggest packaging a chemical as recited in claim 19. Again, Nelli et al. discloses pouring a chemical into the container (column 3, lines 11-17). Therefore, claim 2 is not obvious in view of Nelli et al. and Watson.

Further in this regard, the prior art does not teach the problem or its source. Typically cyanuric acid is broadcast over the surface of the swimming pool water when the swimming pool is not in use. However, cyanuric acid would be most beneficial to stabilize the chlorine during use of the swimming pool, which is achieved with the present invention.

In addition to the arguments made in the previous Amendment, an Affidavit by James R. Mock, Sr. supports Applicants' position that combining Nelli et al. with Watson does not render the present invention obvious.

The attached Affidavit by Mr. Mock provides evidence of what one who is skilled in the art deems to be obvious. Generally, Mr. Mock states that dispensing cyanuric acid with a dispenser separately from a sanitizer such as chlorine is not obvious to one skilled in the art. Currently, either a sanitizer and a stabilizer are dispensed separately, the latter by broadcasting, or a chemical containing both components is used. As discussed in the Affidavit, there are problems associated with both of these, and these problems are solved by use of the present invention.

More specifically, background information on cyanuric acid is provided in paragraphs 5, 6, and 8. In paragraphs 7, 10, and 11, Mr. Mock states that cyanuric acid and dichloroisocyanurate are not equivalent compounds. Therefore, even if it were obvious to combine these references as suggested by the Examiner, combining these references does not result in the present invention, as discussed in paragraph 13. Paragraph 12 discusses reasons why mixing and/or swapping compounds is not obvious to one skilled in the art.

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In this regard, in paragraphs 8 and 9, Mr. Mock discusses the long-felt need that is satisfied with the present invention. Mr. Mock states that there is a long-felt need to dispense cyanuric acid into a pool during daylight hours and/or periods of high use when stabilization of the sanitizer is most beneficial without interfering with the users' enjoyment of the pool. Because the present invention allows for cyanuric acid to be dispensed separately from the sanitizer during use of the pool without interfering with the enjoyment of the pool, this persistent, long-felt need that has not been solved by others is solved with the present invention.

Even if it were obvious to combine the two cited references, the combined references do not result in the present invention. Placing the compound of Watson, dichloroisocyanurate, in the dispenser of Nelli et al. would not result in the present invention. The present invention dispenses a desired amount of cyanuric acid into a swimming pool to stabilize the chlorine in the swimming pool. Again, cyanuric acid is dispensed in addition to chlorine in an independent dispenser, not within the same dispenser or in lieu of the chlorine dispenser. It is not simply placing cyanuric acid within an existing chlorine dispenser, and the permeable bag includes a mesh specific to cyanuric acid so that the desired amount of cyanuric acid is dispensed. It is important to dispense an appropriate amount of cyanuric acid into the swimming pool to stabilize the chlorine without "blocking" the chlorine. Therefore, the present invention is not obvious in view of these references.

Claims 3-4 and 21-22 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Nelli et al. It is the Examiner's position that it would have been obvious to one skilled in the art to have provided the approximate dispensing rate of a product per hour. Because claims 3-4 and 21 are dependent upon claims 2 and 19, respectively, these claims should be allowed. Claim 22 has been amended to recite that the permeable bag contains a desired amount of cyanuric acid and is replaceable when said cyanuric acid has been depleted within said permeable bag. In addition, it is also not obvious to one skilled in the art because cyanuric acid is not available for purchase in such a permeable bag as in the present invention, in particular

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claims 19 and 22. Applicants determined the appropriate material and mesh for the permeable bag to get the desired dispensing rate of the cyanuric acid within the feeder. Rather than measuring the amount of cyanuric acid to be placed within the feeder, the empty permeable bag is replaced with a new permeable bag containing the desired amount of cyanuric acid within the feeder. A high degree of knowledge and expertise is required to maintain the appropriate level of cyanuric acid in a commercial swimming pool, and the present invention allows untrained personnel to maintain these levels. Therefore, the present invention is not well known by those skilled in the art.

Further, a reasonable expectation of success is required. If cyanuric acid is measured and placed into the dispenser disclosed in Nelli et al., the correct dispensing rate of cyanuric acid will not be achieved. If the mesh of the permeable bag is too large, the cyanuric acid will clump together and clog the dispenser. If the mesh of the permeable bag is too small, the cyanuric acid will not be properly dissolved and dispensed from the dispenser. If too little or too much cyanuric acid is dispensed into the pool, it will negatively affect the sanitation conditions of the pool water.

Claims 23-27 have been added to recite that the bag containing cyanuric acid may be replaced with a new bag containing cyanuric acid when the cyanuric acid has been depleted from the bag. This is neither taught nor suggested by the cited references. Therefore, favorable consideration of these claims is respectfully requested.


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Reconsideration of the previous Amendment and favorable consideration of this Amendment After Final and Affidavit are respectfully requested. The Examiner is welcome to contact the undersigned representative for the Applicants should the Examiner wish to discuss this matter.

Respectfully submitted,

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